WHAT IS CLAIMED IS:

1. A method for managing and analyzing information obtained from differential expression of genetic information in biological cells, the method comprising:

receiving crisp input data from sets of expression data from control and treatment sets of cell-derived samples representing a direction and a magnitude of regulation of each one of a higher number of different genes or proteins;

fuzzifying the crisp input data to provide fuzzified values;

applying a set of heuristic rules to the fuzzified values to generate a predicted value of a data point C;

defuzzifying the predicted value of C; and

determining a confidence level of the predicted value of C.

2. The method of claim 1, further comprising:

filtering the crisp data to ensure the crisp data are above a predetermined noise level.

3. The method of claim 2, wherein the applying of the set of heuristic rules is performed by using a decision matrix.

4. The method of claim 2, wherein the determining of the confidence level of the predicted value of C comprises:

calculating a difference r between the defuzzified predicted value and an observed value of C; and

squaring r to provide r^2 and comparing r^2 to a predetermined value, a value of r^2 being smaller than the predetermined value indicating a high confidence level in the defuzzified predicted value of C.

5. The method of claim 4, wherein the determining of the confidence level of the predicted value of C further comprises:

determining a distribution variance of the fuzzified values; and

obtaining a general score, for predicting credibility of decision matrix predictions, based upon the distribution variance and the value of r^2.

6. The method of claim 2, wherein the filtering comprises:

accepting the crisp input data only when one of the crisp input data having a value greater than all other ones of the crisp input data is at least three times larger than another one of the crisp input data having a value less than all other ones of the crisp input data.

7. The method of claim 5, further comprising:

accepting only ones of the input data satisfying $r^2 < .0015$.

8. The method of claim 5, wherein the obtaining of the general score comprises multiplying the distribution variance and the value of r^2.

9. A system for managing and analyzing information obtained from differential expression of genetic information in biological cells, the system comprising:

a data receiver for receiving crisp input data from sets of expression data from control and treatment sets of cell-derived samples;

a fuzzifier for fuzzifying the crisp input data to provide fuzzified values;

a heuristic rules applier for applying a set of heuristic rules to the fuzzified values to generate a predicted value of a data point C;

a defuzzifier for defuzzifying the predicted value of C; and

a confidence level determiner for determining a confidence level of the predicted value of C.

10. The system of claim 9, further comprising:

a filter for filtering the crisp input data to ensure the crisp data are above a predetermined noise level.

11. The system of claim 10, wherein the heuristic rules applier uses a decision matrix.

12. The system of claim 10, wherein the confidence level determiner comprises:

a calculator for calculating a difference r between the defuzzified predicted value and an observed value of C; and

a squarer for squaring r to provide r^2 and for comparing r^2 to a predetermined value, a value of r^2 being smaller than the predetermined value indicating a high confidence level in the defuzzified predicted value of C.

13. The system of claim 12, wherein the confidence level determiner further comprises:

a variance determiner for determining a distribution variance of the fuzzified values; and

a scorer for obtaining a general score, for predicting credibility of decision matrix predictions, based upon the distribution variance and the value of r^2.

14. The system of claim 10, wherein the filter comprises:

an accepter for accepting the crisp input data only when one of the crisp input data having a value greater than all other ones of the crisp input data is at least three times larger than another one of the crisp input data having a value less than all other ones of the crisp input data.

15. The system of claim 13, wherein the scorer comprises a multiplier for multiplying the distribution variance and the value of r^2.

16. A machine-readable medium having recorded thereon machine-readable information, such that when the machine-readable information is read and executed by a computer, the machine-readable information causes the computer to:

receive crisp input data from sets of expression data from control and treatment sets of cell-derived samples representing a direction and a magnitude of regulation of each one of a higher number of different genes or proteins;

fuzzify the crisp input data to provide fuzzified values;

apply a set of heuristic rules to the fuzzified values to generate a predicted value of a data point C;

33

defuzzify the predicted value of C; and

determine a confidence level of the predicted value of C.

17. The medium of claim 16, wherein the machine-readable information further causes the computer to:

filter the crisp data to ensure the crisp data are above a predetermined noise level.

18. The medium of claim 17, wherein the computer applies the set of heuristic rules by using a decision matrix.

19. The medium of claim 17, wherein the machine-readable information causes the computer to determine the confidence level of the predicted value of C by:

calculating a difference r between the defuzzified predicted value and an observed value of C; and

squaring r to provide r^2 and comparing r^2 to a predetermined value, a value of r^2 being smaller than the predetermined value indicating a high confidence level in the defuzzified predicted value of C.

20. The medium of claim 19, , wherein the machine-readable information further causes the computer to determine the confidence level of the predicted value of C by:

determining a distribution variance of the fuzzified values; and

obtaining a general score, for predicting credibility of decision matrix predictions, based upon the distribution variance and the value of r^2.

21. The medium of claim 17, wherein the machine-readable information causes the computer to filter the crisp input data by:

accepting the crisp input data only when one of the crisp input data having a value greater than all other ones of the crisp input data is at least three times larger than another one of the crisp input data having a value less than all other ones of the crisp input data.

22. The medium of claim 20, wherein machine-readable information causes the computer to obtain the general score by multiplying the distribution variance and the value of r^2.